DOCUMENT RESUME

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ABSTRACT

A survey was conducted of Colorado secondary career and technical programs in 1995 to gauge how the state has responded to mandates of the Carl Perkins Vocational and Applied Technology Act of 1990. Results were reported for the first three of nine standards developed by a statewide committee in 1992. The three standards require secondary programs to demonstrate student achievement in career and technical programs in the following areas: (1) basic and applied academic skills; (2) general occupational skills; and (3) specific occupational skills. Information was gathered through a survey questionnaire mailed to each secondary provider with a follow-up, resulting in returns from 92 percent. In the area of standard one, the survey results showed that programs use both commercial and locally developed instruments to measure attainment in this area. About half of the programs had results available, with about 65 percent of those gathered from exit data of program completers. For standard two, programs use a range of methods to assess general occupational skills, with most programs using more than one method of assessment. The most frequently occurring method is tests, followed by checklists, "other," portfolios, and skills profiles. Forty-two percent of secondary programs indicate that they use pre- and posttests to assess general occupational skills whereas the remainder use other methods. About 54 percent of the programs were able to document student general occupational skills attainment. For standard three, programs use a variety of methods to assess specific occupational skills. The most frequent method is locally-developed assessments, followed by successful completion of the program, certification examinations, commercial instruments, portfolios, and "other." Nearly 38 percent of secondary programs indicate that they use pre- and posttests to asses specific occupational skills whereas the remainder use other methods. About 56 percent of the programs had results available to document student specific occupational skills attainment. (KC)

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**TO:** Secondary Vocational Educators and Other Interested Persons

**FROM:** Rick Voorhees

**RE:** **RESULTS, SECONDARY SURVEY OF VOCATIONAL STANDARDS ONE THROUGH THREE**

**DATE:** February 12, 1996

This reports the results of the survey conducted in 1995 of all CCCOES approved secondary career and technical programs in Colorado. The intent of the survey was to gauge how Colorado has responded to mandates under the Carl Perkins Vocational and Applied Technology Act of 1990. These requirements made it necessary to create and carry out a statewide system of standards and measures. This report deals with the first three of nine standards developed by a statewide committee in 1992.

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Designed to allow flexibility at the local level, Colorado Standards One through Three require secondary programs to demonstrate student achievement in career and technical programs. They include 1) basic and applied academic skills, 2) general occupational skills, and 3) specific occupational skills. No statewide profile has been available prior to the results reported here.

The survey questionnaire was mailed to each secondary provider in May 1995. A follow-up mailing to non-respondents was mailed in August 1995. CCCOES staff was involved in personally contacting non-respondents. By November 1995, 934 programs had returned questionnaires, representing 91.9% of all secondary career and technical programs in Colorado.

The pages immediately following are intended to provide highlights from this survey. The last section of this report contains more survey detail in spreadsheet form.



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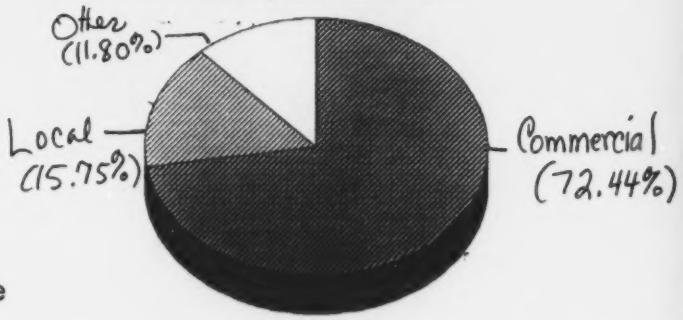
## How have institutions responded to Standard One?

Standard One deals with demonstrating student gains in basic and applied academic skills. This standard deals with how well programs integrate basic skills within the career and technical curriculum.

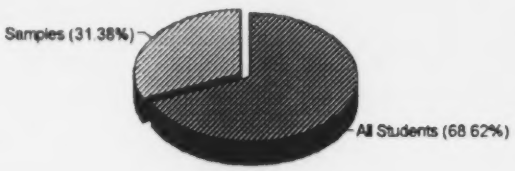
Programs use both commercial (72%) and locally-developed (16%) instruments or assessments to measure student attainment in this area. About 11% of programs report they use "other" sources of measurement to determine gains in basic and applied academic skills, a finding that is puzzling given that these programs did not specify alternative methods.

**Sources of Measurement**
**Basic and Applied Academic Skills**



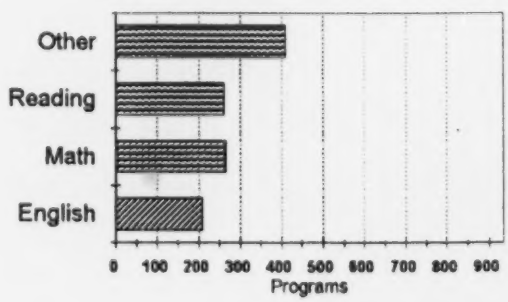

Programs also were asked whether they measured basic and applied academic skills of all students or samples of students. Responses suggest that secondary programs are more likely to assess all students (69%) than their postsecondary counterparts (51%).

**Samples v. All Students**
Basic and Applied Academic Skills



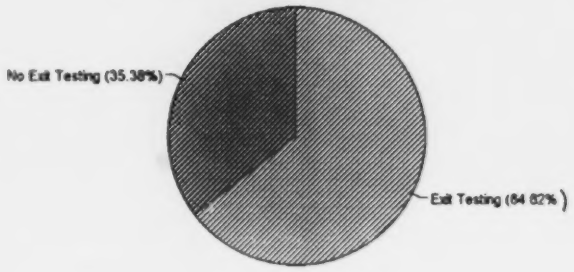

According to this survey, under half of all secondary programs had results, either gain scores or other data, to report for Standard One. The basic skills area most frequently mentioned was "other," followed by reading, math, and English. It is not certain what programs mean when they indicate they have available results in "other" than traditional basic skills areas.

**Availability of Results**
**Basic and Applied Academic Skills**



There are several techniques for demonstrating gain in basic and applied academic skills. Techniques for demonstrating gain utilize exit testing. Sixty-five (65) percent of secondary career and technical programs indicate they use exit testing. The survey was unable to determine what techniques programs not using exit testing utilize to demonstrate *gain*.

**Exit Testing**
Basic and Applied Academic Skills

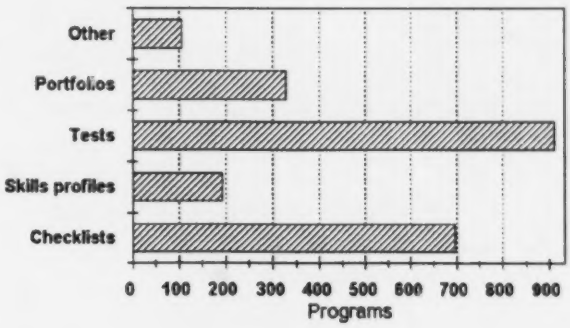



## How have institutions responded to Standard Two?

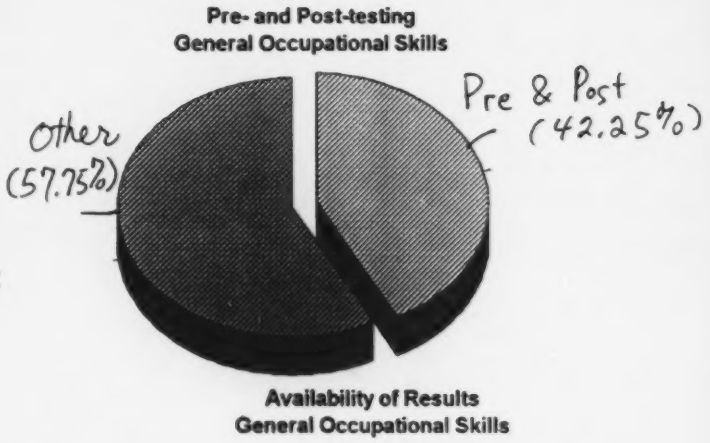
Standard Two deals with demonstrating student attainment in general occupational skills. General occupational skills are those skills needed for success in any workplace, no matter what career is chosen.

Programs use a range of methods to assess general occupational skills. Most programs use more than one method of assessment. The most frequently occurring method is tests, followed by checklists, "other," portfolios, and skills profiles. The category "other" may include demonstrations or other forms of rating.

**Sources of Measurement**
**General Occupational Skills**



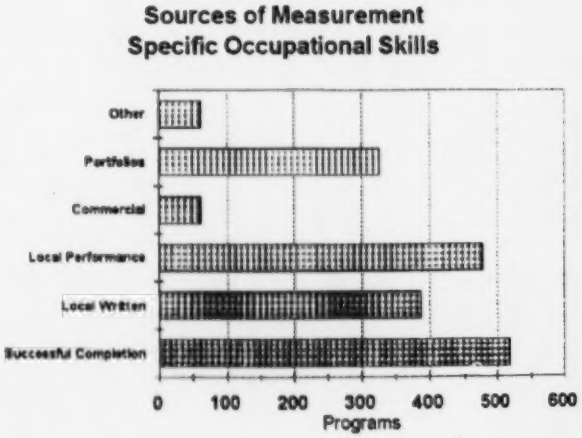
Forty-two percent of secondary programs indicate that they use pre- and post-tests to assess general occupational skills while the remainder use other methods. Unlike basic and applied academic skills (Standard One), this standard does not require that students demonstrate a *gain*. Nonetheless, many secondary programs suggest those gain scores for general occupational skills are in use.




Programs were asked to specify whether results were available to document student general occupational skills attainment. Almost 54 percent of the programs indicate availability of results. Such results are required for program approvals granted after July 1, 1995.

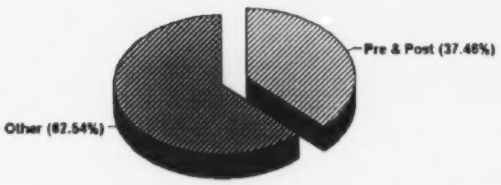
## How have institutions responded to Standard Three?

Programs use a variety of methods to assess specific occupational skills. By far, the most frequently occurring method is locally developed assessments, followed by successful completion (of the program), certification examinations, commercial instruments, portfolios, and "other."



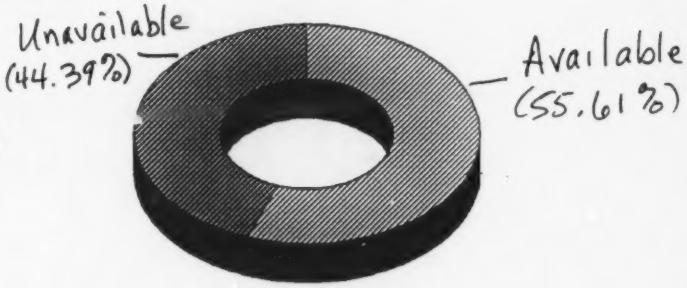
Nearly 38 percent of secondary programs indicate that they use pre- and post-tests to assess specific occupational skills while the remainder use other methods. Unlike basic and applied academic skills (Standard One), neither general or specific occupational skills standards require that students show a gain. Nonetheless, many secondary programs suggest that they produce gain scores for general and specific occupational skills.

**Pre- and Post-testing**
**Specific Occupational Skills**




Programs were asked to specify whether results were available to document student specific occupational skills attainment. Almost 56 percent of the programs responding indicated availability of results. Such results in this area are required for program approvals granted after July 1, 1995.

**Availability of Results**
**Specific Occupational Skills**



## Sources of Measurement for Basic and Applied Academic Skills

| % of total | n | |
|---|---|---|
| | | *Commercially available assessments* |
| 25% | 234 | American College Testing (ACT)/Work Keys |
| 8% | 72 | California Achievement Test (CAT) |
| 8% | 76 | Comprehensive/California Test of Basic Skills (CTBS) |
| 3% | 26 | High School Completion Test (HSCT) |
| 44% | 418 | Iowa Test of Basic Skills (ITBS) |
| 5% | 45 | Pre-/Post-CORD Materials |
| 15% | 140 | Stanford Achievement Tests |
| 17% | 166 | Test of Achievement and Proficiency (TAP) |
| 11% | 106 | Test of Adult Basic Education (TABE) |
| | | *Locally developed assessments* |
| 16% | 156 | Checklist of basic and applied academic skills |
| 9% | 84 | Test of basic and applied academic skills |
| 4% | 39 | Student portfolio demonstrating basic skills proficiency |
| 22% | 209 | *Other Sources of Measurement* |

## Measurement Strategies for Basic and Applied Academic Skills

| % of total | n | |
|---|---|---|
| | | *Average of measurement scores* |
| 31% | 291 | All students at program entry |
| 37% | 353 | All students at program exit |
| 17% | 162 | A sample of students at program entry |
| 25% | 234 | A sample of students at program exit |
| | | *Average change on gain in measurement scores* |
| 23% | 222 | All students at program entry and exit |
| 26% | 250 | Samples of students at program entry and exit |
| 13% | 122 | *Other measurement strategies* |

## Availability of Results for Basic and Applied Academic Skills

| % of total | n | |
|---|---|---|
| | | *Results to program completers* |
| 13% | 128 | Achieving English scores of [n] or better |
| 19% | 178 | Achieving mathematics scores of [n] or better |
| 18% | 173 | Achieving reading scores of [n] or better |
| 6% | 56 | Achieving [other academic area] scores of [n] or better |
| 21% | 203 | Other results for program completers |
| | | *Results to program enrollees (not exit testing of completers)* |
| 8% | 80 | Achieving English scores of [n] or better |
| 9% | 87 | Achieving mathematics scores of [n] or better |
| 9% | 87 | Achieving reading scores of [n] or better |
| 4% | 35 | Achieving [other academic area] scores of [n] or better |
| 12% | 115 | Other results for program enrollees |



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## *Standard Two--General Occupational Skills*

### Sources of Measurement for General Occupational Skills

| % of total | n | |
|---|---|---|
| | | [redacted] |
| 64% | 609 | Locally-developed |
| 9% | 87 | Standardized |
| 20% | 193 | [redacted] |
| | | [redacted] |
| 49% | 469 | Written |
| 46% | 442 | Performance |
| 34% | 327 | [redacted] |
| 11% | 107 | [redacted] |

### Measurement Strategies for General Occupational Skills

| % of total | n | |
|---|---|---|
| | | [redacted] |
| 23% | 216 | All students at program entry |
| 45% | 428 | All students at program exit |
| 14% | 137 | A sample of students at program entry |
| 35% | 332 | A sample of students at program exit |
| | | [redacted] |
| 24% | 227 | All students at program entry and exit |
| 18% | 168 | Samples of students at program entry and exit |
| 15% | 142 | [redacted] |

### Average Results for General Occupational Skills

| Avg. | |
|---|---|
| | [redacted] |
| 83.6 | % achieving [75.1]% of general occupational skills |
| | [redacted] |
| 83.7 | % achieving [76.0]% of general occupational skills |



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## *Standard Three--Specific Occupational Skills*

### Sources of Measurement for Specific Occupational Skills

| % of total | n | |
|---|---|---|
| | | [redacted] |
| 61% | 584 | Locally-developed |
| 4% | 37 | Standardized |
| | | [redacted] |
| 41% | 387 | Written |
| 50% | 478 | Performance |
| | | [redacted] |
| 4% | 42 | Written |
| 2% | 19 | Performance |
| 34% | 325 | [redacted] |
| 54% | 519 | [redacted] |
| 6% | 61 | [redacted] |

### Measurement Strategies for Specific Occupational Skills

| % of total | n | |
|---|---|---|
| | | [redacted] |
| 21% | 201 | All students at program entry |
| 50% | 473 | All students at program exit |
| 13% | 122 | A sample of students at program entry |
| 35% | 330 | A sample of students at program exit |
| | | [redacted] |
| 22% | 214 | All students at program entry and exit |
| 15% | 143 | Samples of students at program entry and exit |
| 8% | 77 | [redacted] |

### Average Results for Specific Occupational Skills

| Avg. | |
|---|---|
| | [redacted] |
| 84.4 | % achieving [75.8]% of general occupational skills |
| 35.0 | % achieving [92.5] score on certification/licensure examinations |
| | [redacted] |
| 82.8 | % achieving [77.2]% of general occupational skills |

NOTE: Percentages may not sum to 100% because of multiple survey responses

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